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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,605

01/22/2004

Casey Loyd

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7259

7590 11/19/2007  
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225 South Lake Avenue, 9th Floor  
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EXAMINER

HUYNH, KHOA D

ART UNIT

PAPER NUMBER

3751

MAIL DATE

DELIVERY MODE

11/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/763,605

Applicant(s)

LOYD ET AL.

Examiner

Khoa D. Huynh

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the original specification. In other words, each claims 1-4 recites the amended limitations "wherein the start capacitor for only that speed is selected to minimize amperage spikes when switching speeds." Such amended claimed subject matter was not described in the original written specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Such lack of descriptive support constitutes new matter.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of claims 1 and 2 includes the limitations: "wherein the start capacitor for only that speed is selected to minimize amperage spikes when switching speeds."

Such recitations render the claim indefinite since it does not have detailed supports in

the instant specification. Since the claim does not clearly set forth the metes and bounds of the patent protection desired, the scope of the claim is unascertainable.

Claims 3 and 4 depend from claims 1 and 2 and are likewise indefinite.

### ***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the recitation "wherein the start capacitor for only that speed is selected to minimize amperage spikes when switching speeds" as recited in amended claims 1 and 2.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1, as best and presently understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art of Figure 4 in view of Shapess (5514943) and Phillips et al. (4453118).

Applicant's prior art of Figure 4 discloses a variable speed electrical motor capable of operating at one of a plurality of discrete operating speeds. The motor includes a start winding and a start capacitor. Applicant's prior art DIFFERS in that it does not specifically include a start winding and a start capacitor for each speed as claimed. Attention, however, is directed to the

Shapess reference which discloses that single phase, variable speed motors are known to be constructed in a capacitor start configuration, wherein the start circuit includes start windings connected in series with start capacitors in order to provide the high torque during start conditions (col. 1, lines 19-30). Attention is also directed to the Phillips et al. reference which also discloses that capacitors may be placed in series with the start windings for further increase the phase displacement of currents between the windings in a known manner (col. 4, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the applicant's prior art of Figure 4 by employing the start winding and start capacitor combination, in view of the teachings of Shapess and Phillips et al., in order to provide the high torque during start conditions and to increase the phase displacement of currents between the windings in a known manner.

Furthermore, even though applicant prior art does not specifically include the selected speed to minimize amperage spikes as claimed, it, however, would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a selected speed to minimize amperage or current spikes. Such modification would be considered a mere choice of a preferred speed on the basis of its suitability for the intended use especially since it is known in the electronic speed control art that changes in speeds cause voltage/current spikes (*see cited US 6078154, US 5686806 & US 4382218*). In other word, each time the speed is switched, the amperage or current applied to the motor is also

varied due to the applied voltages. As would be expected, the currents generated by these voltages spikes could have detrimental effect on the winding and associates components and contributed to the premature components burnout. It is typically recommended that motor be operated with certain predetermined operation parameters, i.e. constant load, constant or selected speeds and so on. Therefore, it is not inventive to discover the optimum speed for an electronic control device by routine trials and errors.

8. Claims 2 and 3, as best and presently understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified applicant's prior art of Figure 4 (as discussed supra) in view of Fisher et al. (6121746).

The modified applicant's prior art of Figure 4 DIFFERS in that it does not specifically include a switch disposed externally as claimed. Attention, however, is directed to the Fisher et al. reference which discloses that two speed induction motor are commonly used in swimming pools and spa pumps, and the high and low speeds are typically selected as desired with an external switch (col. 1, lines 7-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the applicant's prior art of Figure 4 by employing the external switch, in view of the teaching of Fisher et al., to allow the user to manually select either high or low speed for the running operation of the motor. Since the motor is used in a water-contacting environment, it would be wise to enclose the external switch in separate switch box to improve safety.

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9. Claim 4, as best and presently understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lau (6412123) in view of the modified applicant's prior art of Figure 4 (as discussed supra).

The Lau reference discloses a water recreational or spa (Fig. 1). The spa includes a water basin (at 34), a water pump (86), an electric motor (88) for driving the water pump and water circulation conduits (Figs. 5 & 6). The Lau reference DIFFERS in that the electric motor is not a variable speed motor as claimed. Attention, however, is directed to the modified applicant's prior art of Figure 4 which discloses a variable speed electrical motor having all features as discussed in paragraph 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Lau reference by employing a variable speed electrical motor, in view of the teaching of the modified applicant's prior art of Figure 4. Such modification would be considered a mere substitution of one functionally equivalent electrical motor for another in the spa art that would work equally well on the Lau reference.

#### ***Response to Amendment***

10. Applicant's amendment, filed on 10/29/2007, to the pending claims is insufficient to distinguish the claimed invention from the cited prior art or overcome the rejections as discussed above.

***Response to Arguments***

11. Applicant's arguments filed on 10/29/2007 with respect to the pending claims have been fully considered. However, they are deemed not persuasive.

Applicant asserts that the amend limitations can be found in the specification, page 6, lines 12. However, after a full reviewed of the indicated page and line of the specification, it is concluded that such amended limitations do not have any support in the instant specification. Therefore, such amended limitations constitute new matter.

Also, applicant asserts that the combination of references does not teach the amended limitations as recited in amended claims 1 and 2. Nevertheless, such arguments with respect to the pending claims have been considered but are moot in view of the new grounds of rejection and objection as discussed supra.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



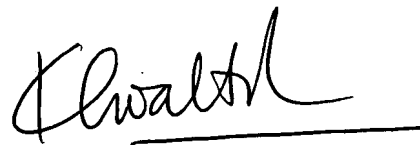
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoa D. Huynh whose telephone number is (571) 272-4888. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'K. Huynh', with a horizontal line underneath.

Khoa D. Huynh  
Primary Examiner  
Art Unit 3751

HK